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TI Surface coating material for preventing neutralization and salt damage of
concrete structure
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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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KR 2001087807	ICM	C09D001-08
	IPCI	C09D0001-08 [ICM, 7]

AB Provided are a surface coating material for preventing neutralization and salt damage of **concrete** structure and its coating method. The material is a mixture of photocatalyst, water soluble modified acrylic resin, cellulose fiber and cement. The coating composition is applied to the surface of the **cement** structure such as bridges, tunnels, cover structures and other **concrete** structures to protect them from atmospheric pollutant such as carbon dioxide, hydrogen sulfide, salt and calcium chloride and eliminate the surface pollution by oxidizing them through photocatalyst using UV light. Further more the coating is tensile at room and low temperature so that it does not break down due to the fine rupture of the **concrete** structure. The composition comprises: 30-50% cement, 10-30% silica fume, 0.5-5% cellulose fiber with 0.01-0.05 mm circumference, 1-6 mm length and tensile strength 3000-8000 kgf/cm; 1-5% titanium dioxide, 0.5-2% mixing agent, 15-25% water soluble modified acrylic resin and 20-35% water. The coating method includes: washing the structure with high pressure water of 200-300 bar; applying the first coating by spraying the composition with 5-10 bar pressure to make 70-80 mm thickness coating; spray coating secondly before 5 h of drying the first coating with 5-10 bar pressure to make the coating thickness of 200-400 µm and hardening the coating with avoiding the direct sunlight.

ST acrylic resin **cement concrete** surface coating compn

IT Fibers

RL: MOA (Modifier or additive use); USES (Uses)

(cellulosic; surface coating compns. for preventing neutralization and salt damage of **concrete**)

- Cement
- photocatalyst